

TERSUS

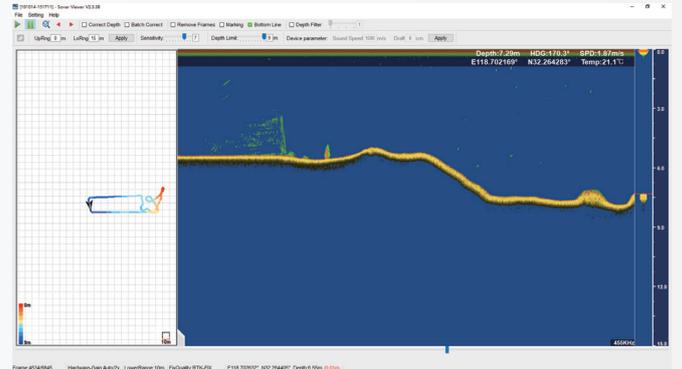
TheDuck™

TheDuck™ floats, and the Depth fixes.

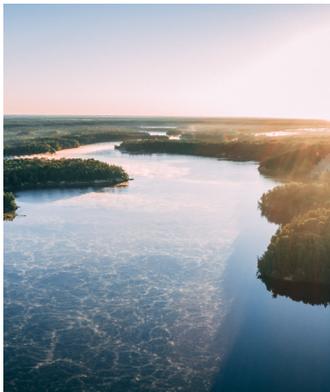


TheDuck™

TheDuck™ represents a smart, efficient, and productive unmanned surface vessel equipped with a single-beam echo sounder. It provides a fast, dependable, and portable solution to perform bathymetric surveys in various environments, such as rivers, lakes, reservoirs, and coastal areas. With its advanced capabilities and user-friendly design, TheDuck™ is a powerful tool for professionals in bathymetry, offering unparalleled accuracy and precision in the collection of positioning and depth data. TheDuck™ is sure to meet your needs and exceed your expectations.



Application Scenario



Rivers



lakes



reservoirs



coastal areas

Features



Versatile Small USV for Bathymetric Surveys

Experience exceptional versatility with TheDuck™, a small USV designed for precise bathymetric surveys of lakes, inland rivers, and coastal areas.



Enhanced Safety

Equipped with two plug-in metal ducted propeller, TheDuck™ effectively reduces the risk of entanglement with fishing nets, water plants, and surface debris, enhancing operational safety.



Effortless Operation

Simplify your project with one-man operation throughout the entire process. From on-site transport to installation, operation, and data collection, TheDuck™ offers convenience and efficiency.



Optional Echo Sounder

TheDuck™ is equipped with a built-in single-beam echo sounder (100 meters@455 kHz or 300 meters@200 kHz).



Unmatched Performance

TheDuck™ boasts a lightweight, strong, and stable M-shaped design with a hull made of polymer PP alloy, ensuring optimal performance in various environments.



Expanded Capabilities

Maximize TheDuck™'s potential by equipping it with Oscar/Oscar-TAP/Luka, unlocking a wider range of applications.



Seamless Data Transmission

Enjoy enhanced data transmission capabilities with TheDuck™'s two omnidirectional dual 2.4GHz RF antennas. Transmit data over longer and more stable distances (up to 2km), with auto-return functionality in case of signal loss.



Real-time Data Management

Powered by Android-based software, TheDuck™ provides real-time data display and automatic data recording, ensuring seamless job execution and efficient data management.



Autonomous Obstacle System

Intelligently perceives and autonomously evades hazards, ensuring safely and efficiently completes missions.

Technical Specifications



TheDuck™

Physical		Direction Control:		ES200 Single Beam Echo Sounder	
Hull Dimension:	1000*530*340mm	Differential veering and reverse without steering engine		Sounding Range	
Weight:	7KG(w/o instrument and battery)	Positioning		0.15m to 100m, 0.15m to 300m (Optional)	
	18KG(Maximum Load)	Satellite System BDS, GPS, GLONASS, GALILEO, QZSS		Frequency 455KHz, 200KHz(Optional)	
	22KG(Normal Weight)	Real Time Kinematic Positioning Accuracy(RMS)		Beam Angle: 5°(455KHz/200KHz)	
Material:	High Strength PP Alloy	- Horizontal:	±(8mm+1ppm)	Sound velocity Setting:	
Hull Design:	M-Shaped	- Vertical:	±(15mm+1ppm)	Automatic or Manual 1350 – 1750m/s	
Anti-Wave & Wind:	3rd Wind Level and 2nd Wave Level	Remote Control		Draft: 0~10m	
Water Proof:	IP67	Communication Method		Sounding Accuracy:	
Power		Real time RF peer-to-peer transmission		1cm±0.1%*D (D is the depth of water)	
Rechargeable Lithium Battery:	8S 29.6V 31.5Ah x2	Range	2KM	Resolution:	1cm
Battery Weight:	4.5kg X2	Screen Size	7" high-definition display screen	Data Storage:	Automatic Storage, 16GB Memory
Battery Endurance:	6 Hours x2(run at 2m/s)	Waterproof	IP54	Data Format:	tsl3, csv, txt
Maximum Speed:	7m/s	Function	Real-time displays USV control data, water depth, positioning status, video data, and power	Operating Temperature:	-5°C – 50°C
Propeller type:	2 plug-in mental ducted propeller	Camera Parameters			
Type:	Electric	FOV120°, resolution 1080P, video format H264			

Tersus GNSS Inc.

Right to the point.

Tersus GNSS is a leading Global Navigation Satellite System (GNSS) solution provider. Our offerings and services aim to make centimeter-precision positioning affordable for large-scale deployment.

Founded in 2014, we have been pioneers in design and development GNSS RTK products to better cater to the industry's needs. Our portfolios cover GNSS RTK & PPK OEM boards, David GNSS Receiver, Oscar GNSS Receiver and inertial navigation systems.

Designed for ease of use, our solutions support multi-GNSS and provide flexible interfaces for a variety of applications, such as UAVs, surveying, mapping, precision agriculture, lane-level navigation, construction engineering, and deformation monitoring.

Descriptions, specifications and related materials are subject to change.

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To learn more, please visit: www.tersus-gnss.com

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